

CLAIMS:

1. A cordless microscope comprising:  
a stand;  
a stage supported by the stand for holding specimens to be viewed;  
5 an objective lens supported by the stand for magnifying an image of a specimen on the stage;  
an eyepiece lens supported by the stand and coupled with the objective lens for further magnifying the image of the specimen and for permitting a user to view the image; and  
10 a light source assembly for illuminating the stage, the light source assembly including -  
a circuit board, and  
a plurality of LEDs mounted on the circuit board for projecting light toward the stand.

15 2. The cordless microscope as set forth in claim 1, the light source assembly further including a first connector mounted on the circuit board, electrically connected with the LEDs, and configured for connecting to a battery for powering the LEDs.

20 3. The cordless microscope as set forth in claim 2, the light source assembly further including a second connector mounted on the circuit board and configured for connecting to a switch so as to electrically connect the switch between the battery and the LEDs for switching the LEDs between on and off states.

25 4. The cordless microscope as set forth in claim 1, the stand including a base in which the light source assembly is mounted and an upstanding arm on which the stage, the objective lens, and the eyepiece lens are supported.

30 5. The cordless microscope as set forth in claim 4, wherein the circuit board is circular in shape and configured for fitting within a circular opening in the base.

6. The cordless microscope as set forth in claim 1, wherein the circuit board is coated with a reflective material to reflect light emitted from the LEDs.

7. The cordless microscope as set forth in claim 1, wherein the light source assembly includes 4 LEDs.

8. The cordless microscope as set forth in claim 3, the light source assembly further including a third connector configured for connecting to a battery recharger for recharging the battery.

9. The cordless microscope as set forth in claim 1, wherein the LEDs have a highly-focused angle of illumination so that most of the light from the LEDs is projected upwardly toward the stage.

10. The cordless microscope as set forth in claim 9, wherein the angle of illumination of the LEDs is approximately 20 degrees.

15 11. The cordless microscope as set forth in claim 4, wherein the battery is mounted within the base.

12. The cordless microscope as set forth in claim 1, wherein the LEDs are arranged in a substantially Y-shaped configuration on the circuit board.

20 13. A cordless microscope comprising:  
a stage for holding specimens to be viewed; and  
a light source assembly for illuminating the stage, the light source assembly including -  
25 a circuit board, and  
a plurality of LEDs mounted on the circuit board for projecting light toward the stage.

30 14. The cordless microscope as set forth in claim 13, the light source assembly further including a first connector mounted on the circuit board, electrically connected with the LEDs, and configured for connecting to a battery for powering the LEDs.

15. The cordless microscope as set forth in claim 13, wherein the light source assembly includes 4 LEDs.

16. The cordless microscope as set forth in claim 14, the light source assembly further including a second connector mounted on the circuit board and configured for connecting to a switch so as to electrically connect the switch between the battery and the LEDs for switching the LEDs between on and off states.

17. The cordless microscope as set forth in claim 16, the light source assembly further including a third connector configured for connecting to a battery recharger for recharging the battery.

18. The cordless microscope as set forth in claim 13, wherein the LEDs have a highly-focused angle of illumination so that most of the light from the LEDs is projected upwardly toward the stage.

19. A light source assembly for use in a microscope, the light source assembly comprising:

a circuit board,  
20 a plurality of LEDs mounted on the circuit board for projecting light upwardly from the circuit board; and  
a first connector mounted on or coupled with the circuit board, electrically connected with the LEDs, and configured for connecting to a battery for powering the LEDs.

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20. The light source assembly as set forth in claim 19, further including a second connector mounted on or coupled with the circuit board and configured for connecting to a switch so as to electrically connect the switch between the battery and the LEDs for switching the LEDs between on and off states.

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21. The light source assembly as set forth in claim 19, wherein the circuit board is circular in shape.

22. The light source assembly as set forth in claim 19, wherein the circuit board is coated with a reflective material to reflect light emitted from the LEDs.

23. The light source assembly as set forth in claim 19, wherein 4 LEDs are  
5 mounted on the circuit board.

24. The light source assembly as set forth in claim 20, further including a third connector configured for connecting to a battery recharger for recharging the battery.

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25. The light source assembly as set forth in claim 19, wherein the LEDs have a highly-focused angle of illumination so that most of the light from the LEDs is projected upwardly.

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